

PROJECT BACKGROUND, GOALS AND IMPACTS

"Anyone who can solve the problems of water will be worthy of two Nobel prizes - one for peace and one for science."

—John F. Kennedy

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VISION STATEMENT

Listening to the River helps teens learn about their watershed by combining field experiences with digital media recording and production technologies, and then helps them share their discoveries, unique perspectives and interpretations with the public through web-based interactive maps, radio broadcasts and museum exhibits.

Rationale: Why LTRR was developed

[This section is included to help adopting communities “make the case” for similar activities]

Inherent in the above LTRR vision statement was the need to link technology, watershed science and youth. To do this, project staff needed to tap the expertise available in the Grand Traverse area communities.

The Coalition for Watershed Education had to first determine if this was a viable vision for their community. The partners turned to two sources: conversations with representatives of local organizations, and statistics from education research agencies. Two clear findings emerged from this background research:

1. Teens had only a basic understanding of watershed concepts and characteristics;
2. There was no process in place to organize a number of community organizations and individuals to plan joint events and activities around watershed concepts.

Evidence from Michigan’s Department of Education pointed out that one third of junior and senior high school students in Michigan may lack basic knowledge and skills in science and

math¹. The National Environmental Education Training Foundation’s annual Roper Survey of Adult Americans² reported that this lack of science understanding carries into adulthood, where nationally, for example, only 41% of adults know what a watershed is.

Planners felt the *LTR* vision could also meet a clear local need for connecting area groups with similar missions. There were many groups in northwest Lower Michigan offering informal science activities that dealt with water resources, science, youth and technology, but they took place in isolation. It seemed to be ideal timing to develop new opportunities to create and stimulate sustained links among the organizations to focus on activities at the frontiers of informal science learning. So project planners embarked on planning an ISE Summit as the first step in building a rich program of watershed education opportunities.

“ISE refers to programs and experiences developed outside of the classroom by organizations and institutions such as like museums, parks, environmental education, youth and community outreach centers”.

–National Science Teachers Association

A Summit Is Born

With support from a National Science Foundation planning grant, the Coalition for Watershed Education hosted a day-long session titled “*Building an Appreciation of Watersheds: ISE Summit.*” More than 40 representatives from a diverse mix of organizations – science educators, non-profit organizations, water resource researchers, advocacy groups, technology providers and youth advocacy groups spent a day mobilizing to improve understanding of ISE, explore innovative ideas and stimulate collaborative relationships.

The *Summit* clarified the goals and vision for the *LTR* project, and enabled the proposal writers to assess interest, needs, and to “test drive” project ideas. It confirmed two assumptions held by CWE members:

1. There was an extensive inventory of local and regional programs and projects driven by informal science education in the Grand Traverse area;
2. People and organizations that sponsored these events were not completely aware of what others were doing.

Summit participants enthusiastically welcomed the opportunity to network. Subsequently, this became a central purpose of the *LTR* project: to coalesce like-minded groups in order to develop and implement a set of ISE activities that not only related to the individual missions of the organizations, but helped them “partner” to invest in long-term, sustainable commitments to work together to serve youth through environmental education.

¹Michigan Educational Assessment Program Summary Results. (Fall 2004 and Winter 2005).

² National Environmental Education Training Foundation, (NEETF). (1999). *National Report Card on Environmental Knowledge, Attitudes and Behaviors: Seventh Annual Roper Survey of Adult Americans*. National Environmental Education Training Foundation, Washington, D.C.

The Summit shed light on focus areas deemed critical by the participant organizations:

- Awareness and understanding of watershed issues and the resulting increased stewardship;
- A focus on students and younger children so there could be lasting impact and sustainability;
- The importance of paying attention to the difference in youth and adult perspectives;
- The concept that watersheds cross boundaries: political jurisdictions, geographical, demographics and generations.

LTTR Project Goals

After the Summit, CWE staff developed a full blown proposal to the National Science Foundation. The proposal resulted in a \$1.4 million grant to the CWE for a *Listening to the River* program, based on two goals:

Goal One

To build an innovative and sustainable program of informal watershed science learning opportunities for teenagers, children, and adults by tapping the expertise and capacity already present in a dynamic coalition of local and regional organizations.

Goal Two

To document and describe the Coalition's flexible structure and strategies for informal watershed science education so they can be adapted for use by other regional coalitions in communities and watersheds throughout the Great Lakes Region and beyond.

Project Impacts

LTTR project planning then coalesced around specific intended impacts.

Public Audience Impacts:

1. Youth develop a greater understanding of science, specifically watersheds, through participation in watershed discovery activities;
2. Youth develop a greater understanding of the use of technology in field-based explorations, data collection, and multi-media production;
3. Waterscapes museum exhibit visitors will increase their interest in local watersheds through visits to the exhibit.

Professional Audience Impact:

1. LTTR Project partners and other organizations engage in long-term, sustainable commitments to work together to serve youth by providing environmental education.

Strategic Impact:

1. This project results in a set of dynamic watershed education strategies for youth.

A Chronology of LTTR Project Steps

YEAR ONE (2006): Initial Steps of Project Planning & Implementation

- **(Months 1-3)** *Coalition for Watershed Education (CWE)* commences regular planning meetings to develop policy and practices; LIAA builds the *Watershed Education Website*; youth recruitment process initiated; marketing and public relations materials developed; project staff identify a list of mentors and content specialists with expertise in ISE topics/watershed issues and set up an incentive process; project staff orient and train mentors/specialists and youth.
- **(Months 3-6)** *Watershed Discovery* component focus: form development, site selection criteria, field experiences, transportation, preparing toolkits, field work guidelines and pilot field sessions. The *Website* is used as a project management tool.
- **(Months 6-12)** Field team expansion, initial design of the two exhibits, “Blue Sky” exhibit design charrette, and the *Mini Waterscapes Exhibit*.
- **(Months 1-12)** Ongoing formative evaluation activities.

YEAR TWO (2007): Continued Development and Refinement of All Events and Processes:

- The *CWE* expands, monitors, supervises all ongoing project components, and reaches out to other community organizations for joint programming.
- The *CWE* begins organizing documentation toward development of the dissemination materials (*Community Guide* and *Exhibit Kit Book*) to be used in other communities.
- Additional delivery models for *Watershed Discovery* activities are tried: a spring break institute, week-long summer program; field work in conjunction with established groups such as *Youth Conservation Corps* and nature centers.
- Additional STEM content field data, sounds and images are captured and posted to the *Website*, used in the radio segments and incorporated into a mini exhibit.
- A *SoundScapes Radio Academy* is implemented.
- Construction on both the *WaterScapes Mini Exhibit* and the *Museum Exhibition* begins. The mini-exhibit is installed at the *Children’s Museum*.

YEARS THREE/FOUR (2009-2010): Refining and Documenting the Project Activities for Replication:

- The *WaterScapes Exhibit* is installed, opened, tested, and remediated.
- Project staff members facilitate the replication of the project at a pilot site.
- Final project materials are developed, tested and disseminated.
- A one-day regional dissemination conference is developed and presented.
- Outreach activities contribute to sustaining the project infrastructure in the host community.